

Supplementary Appendix

This appendix has been provided by the author to give readers additional information about her work.

Supplement to: Boussiotis VA. Molecular and biochemical aspects of the PD-1 checkpoint pathway. *N Engl J Med* 2016;375:1767-78. DOI: 10.1056/NEJMra1514296

List of Abbreviations

PD-1: Programmed cell death-1
PD-L1: Programmed cell death ligand-1
PD-L2: Programmed cell death ligand-2
B7-H1: B7 homologue-1
B7-H2: B7 homologue-2
B7-H3: B7 homologue-3
CTLA-4: Cytotoxic T lymphocyte associated protein 4
ICOS: Inducible costimulator
RGMB: Repulsive guidance molecule B
TLT-2: Trem-like transcript 2 protein
NFAT: Nuclear factor of activated T cells
Foxo1: Forkhead box protein O1
IRF9: Interferon regulatory factor 9
VEGF: Vascular endothelial growth factor
SH2 domain: Src homology 2 domain
SH3 domain: Src homology 3 domain
SHP1: Src homology region 2 domain containing phosphatase 1
SHP2: Src homology region 2 domain containing phosphatase 2
Ig β : Immunoglobulin beta chain
Syk: Spleen tyrosine kinase
PLC-g1: Phospholipase C gamma 1
PLC-g2: Phospholipase C gamma 2
Erk1: Extracellular signal regulated kinase 1
Erk2: Extracellular signal regulated kinase 1
Lck: Lymphocyte cell-specific protein-tyrosine kinase
ZAP-70: Zeta-chain associated protein kinase 70
PI3K: Phosphatidylinositol-4,5-bisphosphate 3-kinase
Akt: V-Akt Murine Thymoma Viral Oncogene Homolog
PTEN: Phosphatase and tensin homolog
CK2: Casein kinase 2
MEK: Mitogen activated protein kinase kinase (also known as MAP2K)
MEKK: Mitogen activated protein kinase kinase kinase (also known as MAP3K)
RasGRP1: RAS guanyl-releasing protein 1
BATF: Basic Leucine Zipper ATF-Like Transcription Factor
F1F0-ATP synthase: F1F0-adenosine triphosphate synthase
EGFR: epidermal growth factor receptor
STAT3: Signal transducer and activator of transcription 3
HIF-1: Hypoxia inducible factor 1
JAK2: Janus kinase 2
pSTAT1: phosphorylated Signal transducer and activator of transcription 1
PIP2: Phosphatidylinositol (4,5)-bisphosphate
PIP3: phosphatidylinositol (3,4,5)-trisphosphate
mTOR: mechanistic target of rapamycin (also known as mammalian target of rapamycin)
SLP-76: Lymphocyte cytosolic protein 2
GADS: Grb2-related adaptor downstream of Shc

GRB2: Growth factor receptor-bound protein 2

SOS1: Son of sevenless

GRAP: GRB2-Related Adaptor Protein

DAG: Diacylglycerol

IP3: Inositol trisphosphate

Glut1: Glucose transporter 1